REMARKS

On page 2 of the Office Action, claim 1 was objected to because of a misspelling. Applicants have amended the claim to make this spelling correction. Claim 1 was also amended to clarify that the copolymers stated under B) may comprise up to 4 % by weight of vinyl acetate or up to 5 % by weight of further comonomers except vinyl acetate. Support is found on page 9, lines 14-21 of the specification.

On page 2 of the Office Action, claims 7 and 8 were rejected under 35 U.S.C. 112, first paragraph. Applicants have amended claim 7 such that it is clear that the claim refers to the structural units under B) for which there is support in the specification. Applicants have also amended claim 8 to clarify that the further comonomers are higher olefins having at least 5 carbon atoms, and it is the further comonomers that may be present up to 5% by weight. Applicants point to page 9, lines 14-21 of the specification for support. No new matter has been added. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

On page 3 of the Office Action, claims 1-17 were rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsubishi EP 217,602 in view of Applicants alleged admission and Reimann et al., U.S. Patent No. 5,254,652 ("Reimann") as applied to claims 1-17 and further in view of Brown, WO 95/23,200. On page 3 of the Office Action, it is acknowledged by the Examiner that EP 217,602, Applicants' alleged admissions, and Reimann are silent as to a mineral oil having: a cloud point below –8 degrees Centigrade, a 95% distillation point of less than 350 degrees Centigrade, and a sulfur content of less than 500 ppm. Thus, the Examiner is relying upon Brown to address the shortcomings of the prior cited references. Not only do Applicants reiterate their arguments with respect to these references as set forth in their previous

responses, but Applicants submit that Brown does not in combination with these references render the present invention obvious for the reasons set forth below.

At the outset, Applicants wish to emphasize a few technical terms known to one of ordinary skill in the art. First, the cloud point of an oil is the temperature at which the oil becomes opaque because of the beginning precipitation of paraffin. Second, the cold filter plugging point (CFPP) of an oil is the temperature below the cloud point where the amount of precipitated paraffin becomes sufficient to plug a standardized fuel filter. Third, the pour point (PP) is the temperature below CFPP where the amount of precipitated paraffin is sufficient to inhibit the oil from flowing completely (i.e. the oil becomes essentially solid).

Applicants point out that all middle distillates contain linear paraffin that crystallize upon cooling. When an oil is cooled down, these paraffin crystals begin to grow until they cause filter plugging (CFPP), and upon further cooling they form an interlocking network that prevents flow (PP). In general, the temperature difference between CP and CFPP is small, for example 1°C to 4°C. The temperature difference between CFPP and PP is generally considerably higher (i.e. greater than 10°C). Under arctic conditions, special oils are required. These oils have low amounts of long chain paraffin with more than 26 carbon atoms. This results in a low CP, low 95% distillation point, and a low (90-20) distillation range. Due to the low content of long chain paraffin, the paraffin chain length distribution of the remaining paraffin is narrowed. The narrow paraffin chain length distribution results in two effects: paraffin with like chain lengths crystallize more readily and paraffin with like chain lengths crystallize at similar temperatures. These effects cause the paraffin to precipitate at a narrow range below CP or CFPP respectively.

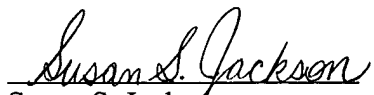
Applicants submit that Brown does not teach or suggest the PP of the oils used. Brown discloses only the CP and CFPP. Applicants submit that Brown also does not teach or suggest

the difference between PP and CFPP of the present invention. The Examiner claims that Brown teaches a difference between CFPP and PP of less than 10°C, citing passages from Brown. Applicants submit that the Examiner has mistakenly confused the meanings of cloud point, cold filter plugging point (CFPP) and pour point (PP). Applicants refer to the meaning of these terms set forth above to clarify this confusion. Thus, from these definitions it should be clear that Brown does not teach or suggest the pour point (PP) or any differences between CFPP and PP. Therefore, Applicants submit that not only does Brown fail to address the shortcomings of the other cited references, but there is no motivation provided in Brown to modify the other cited references. Therefore, Applicants submit that none of the cited references render the present invention obvious.

Aside from the above, Applicants submit that Brown teaches away from the present invention as Brown's invention requires the use of comb polymers (see p. 3, lines 30-32; page 4, line 30; claim 1) as opposed to the ethylene backbone polymers of the present invention. Since Brown teaches away, Brown is not properly combinable with the other cited references. Thus, the rejection must fail. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection.

In view of the foregoing, it is respectfully urged that the present claims are in condition for allowance and reconsideration is requested. An early notice to this effect is earnestly solicited. Should there be any questions regarding this application, the Examiner is invited to contact the undersigned at the number shown below.

Respectfully submitted,



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Enclosures:
Version with markings to show changes made

VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (Amended) A fuel oil middle distillate composition comprising:

A) a mineral oil having a cloud point of less than -8°C, a boiling range (90-20%) of less than 120°C, a 95% distillation point of less than 350°C and a difference between CFPP and PP of less than 10°C, and

B) one or more copolymers present in an amount of 0.001 to 2% by weight, based on the weight of the oil, wherein the copolymers have melt viscosities of from 20 to 10,000 mPas at 140°C and wherein the copolymers consist essentially of a) and b):

a c) bivalent structural unit (B1) present in an amount of from 85 to 97 mol%,

wherein (B1) is a bivalent structural unit of formula (1)

$-CH_2-CH_2-$ (1)

and

b d) one or more bivalent structural units (B2) present in an amount of from 3 to 15 mol% of,

wherein (B2) is either a bivalent structural unit of formula (2):

$-CH_2-CR^1R^2-$ (2)

in which

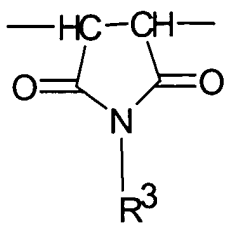
R^1 is hydrogen or methyl,

R^2 is $COOR^3$, OR^3 or $OCOR^3$, and

R^3 is an alkyl radical having at least 4 [an] and at most 30 carbon atoms,

or

(B2) is a bivalent structural unit of formula (2a)



(2a)

in which

R^3 is an alkyl radical having at least 4 and at most 30 carbon atoms,

wherein the copolymers comprise up to 4% by weight of vinyl acetate or up to 5% by weight of further comonomers except vinyl acetate.

7. (Twice Amended) The fuel oil composition as claimed in claim 1, wherein the structural unit[s] (B2) under B) [are] is selected from the group consisting of vinyl ethers, alkylacrylates, or alkyl methacrylates [or higher olefins having at least 5 carbon atoms].

8. (Amended) The fuel oil composition as claimed in claim [7] 1, wherein the further comonomers are higher olefins [selected from the group consisting of hexene, 4-methylpentene, octene and diisobutylene] having at least 5 carbon atoms.